

SEPTEMBER 2019



**WIM #38  
I-535, MP 1.1  
DULUTH, MN**

**MONTHLY  
REPORT**



*Your Destination...Our Priority*



## WIM Site Location

WIM #38 is located on I-535 near Duluth in St Louis county.

## System Operation

WIM #38 was operational for the entire month of September 2019. Volume was computed using all monthly data.

## System Calibration

WIM #38 was most recently calibrated on 2017-01-23. Table 1 summarizes the front axle weights of class 9s by lane <sup>1</sup>. Figure 1 shows the distribution of gross vehicle weights (GVW) in Class 9 vehicles at this site for the last 12 months of operation <sup>2</sup>. Figure 2 depicts the average front axle weight as a percent difference from the first full month following calibration.

## Summary of Volume Statistics

Total Monthly Volume: 1047827 | Passenger Vehicles: 991094 | Heavy Commercial Vehicles: 56733

Monthly Average Daily Traffic (MADT): 35284 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 1891

See Table 2 for vehicle class breakdown

## Passenger Vehicles (PVs) and Heavy Commercial Vehicles (HCVs)

**Volume trends.** NB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Sundays. SB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Sundays (see Figure 3 and 4).

### Passenger Vehicles (PVs)

**Volume trends.** On an average 24-hour day (see Figure 5), NB PVs generally reached peak volume levels between 03 PM and 05 PM. Similarly, SB PVs peaked in volume between 03 PM and 05 PM

### Heavy Commercial Vehicles (HCVs)

**Volume trends.** On an average 24-hour day, HCVs traveling NB typically reached peak volume levels between 03 PM and 05 PM, while volume going SB peaked between 03 PM and 05 PM. See Figure 6. Out of all HCVs, the two highest traffic volumes were generated by Class 9's and Class 5's.

### Overweight HCVs

**Volume trends.** Of a total of 56733 HCVs, 2886 of them were overweight <sup>3</sup>. These overweight HCVs contributed to 0.3% of total monthly volume, and 5.3% of total monthly

HCV volume. NB overweight vehicles typically reached highest numbers on Fridays, with lowest volumes reported on Sundays. SB overweight vehicles tended to reach highest volumes on Fridays, with lowest volumes reported on Sundays. See Figure 3 .

The top two overweight violators by class were the class 9 and class 6 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 55% of all overweight vehicles traveling NB this month (see Figure 7 & 8). Figure 9 shows the number of vehicles exceeding 88,000 pounds that crossed the WIM over the last 12 months. The highest number of 88,000+ vehicles within the last 12 months occurred in July.

WIMs are currently used as a screening tool for weight enforcement, and it is estimated that the WIM scales can measure gross vehicle weights (GVW) within 90-95% of static weight scale measurements. Due to the possibility of measurement error, vehicles exceeding 10% of their legal weight limits (or 1.1 times their legal weight limits) are considered overweight in this report <sup>4</sup>.

Using normal load limits ,56 NB vehicles exceeded 88,000 pounds (24 vehicles were Class 13's; 17 vehicles were Class 10's). Of vehicles traveling SB,

122 NB vehicles exceeded 88,000 pounds (94 vehicles were Class 10's; 27 vehicles were Class 13's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from September 2019.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in September 2019. Data suggests that there were greater numbers of fully\_loaded Class 9's than empty Class 9's traveling NB, while there were more fully\_loaded Class 9's than empty traveling SB. Data also suggests that there were more fully\_loaded Class 10's than empty traveling in the NB direction. In the SB direction, there were more fully\_loaded class 10 vehicles.

**Freight Totals.** A total of 380383 tons of freight was recorded to have crossed the WIM. More freight was shipped SB (53.6%) than NB (46.4%). See Table 4 and Figure 11 for more freight information.

**####Infrastructure Considerations Bridge.** Bridge No. 9030 (Blatnik Bridge) is approximately 1.1 miles south of WIM #38, and Bridge No. 69808 is 0.45 miles south of WIM #38. A pair of bridges also exists 0.4 miles north of WIM #38 (Bridge No. 69801C on the NB side and Bridge No. 69801N on the SB side). WIM #38 recorded a total of 1047827 vehicles with a combined GVW of 6292146 kips (1 kip = 1,000 pounds = 0.5 tons) in September 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 42167 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 60.7% of all ESALs were recorded NB while 39.3% was observed SB. In particular, 43% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 17% of total GVW observed this month). See Table 6 and Figures 14-15 for more information on ESALs (Table 6 also provides flexible ESAL factors for each vehicle class using a terminal serviceability of 2.5 and a structural number of 5).

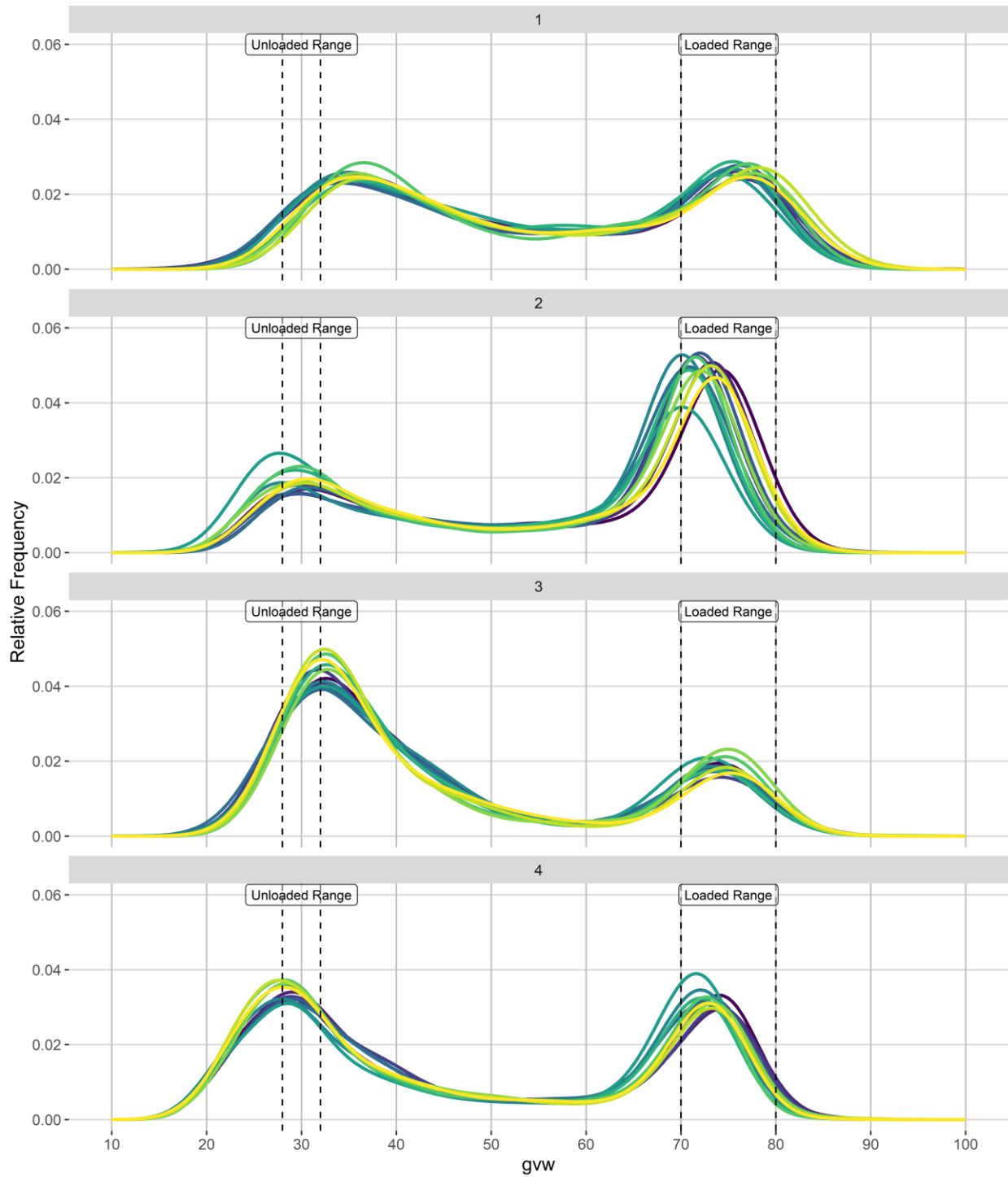
#####WIM monthly reports can be found at:

<http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html> MnDOT's vehicle classification scheme and vehicle class groupings for traffic forecasting can be found at:  
<http://www.dot.state.mn.us/traffic/data/data-products.html#weight>

- <sup>1</sup> Front axle weights of Class 9s are monitored on a monthly basis to assure performance between calibrations. The current goal of the WIM scale calibration is to have each individual axle weight stay within a range of ±9% of baseline calibration values
- <sup>2</sup> Previous WIM research indicates that unloaded Class 9s typically weigh 28-32 kips, while loaded Class 9s generally fall in the 70-80 kip range. More recent data from several WIM sites suggests that the unloaded Class 9 range may have moved a little higher over time (due to increased presence of sleeper cabs, etc.), although these ranges are also thought to be site-specific.
- <sup>3</sup> An HCV is considered overweight during normal load limits in this report if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 80,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 20,000 pounds; tandem axles spaced 8' or less = 34,000 pounds; tridem axles spaced 9' or less = 43,000 pounds; quad axles spaced 13' or less = 51,000 pounds). Monthly reports use this standard regardless of the time of year however, the Winter Load Increase (WLI) allows a 10% across the board increase in axle and gross vehicle weights without a permit on US, state routes, and county roads. An HCV is considered overweight during Winter Load Increase(WLI) if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 88,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 22,000 pounds; tandem axles spaced 8' or less = 37,400 pounds; tridem axles spaced 9' or less = 47,300 pounds; quad axles spaced 13' or less = 56,100 pounds). An overweight HCV is only included once in the overweight volume calculations regardless of how many of the aforementioned conditions are violated. For information on MN weight limit dates and statutes:  
[http://www.mrr.dot.state.mn.us/research/seasonal\\_load\\_limits/sllindex.asp](http://www.mrr.dot.state.mn.us/research/seasonal_load_limits/sllindex.asp)
- <sup>4</sup> For example, Class 9s and 10s can legally have gross vehicle weights up to 80,000 lbs (with the exception of permitted loads) during normal load limits. To account for measurement error on the WIM scales, those exceeding 10% of the legal GVW maximum (or 1.1 times the legal GVW) should be screened (e.g., 80,000 lbs + 8,000 lbs = 88,000 lbs). Similarly during WLI vehicles weighing 96,800 lbs should be screened.

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Figure 1 - Monthly Class 9 GVW Histogram



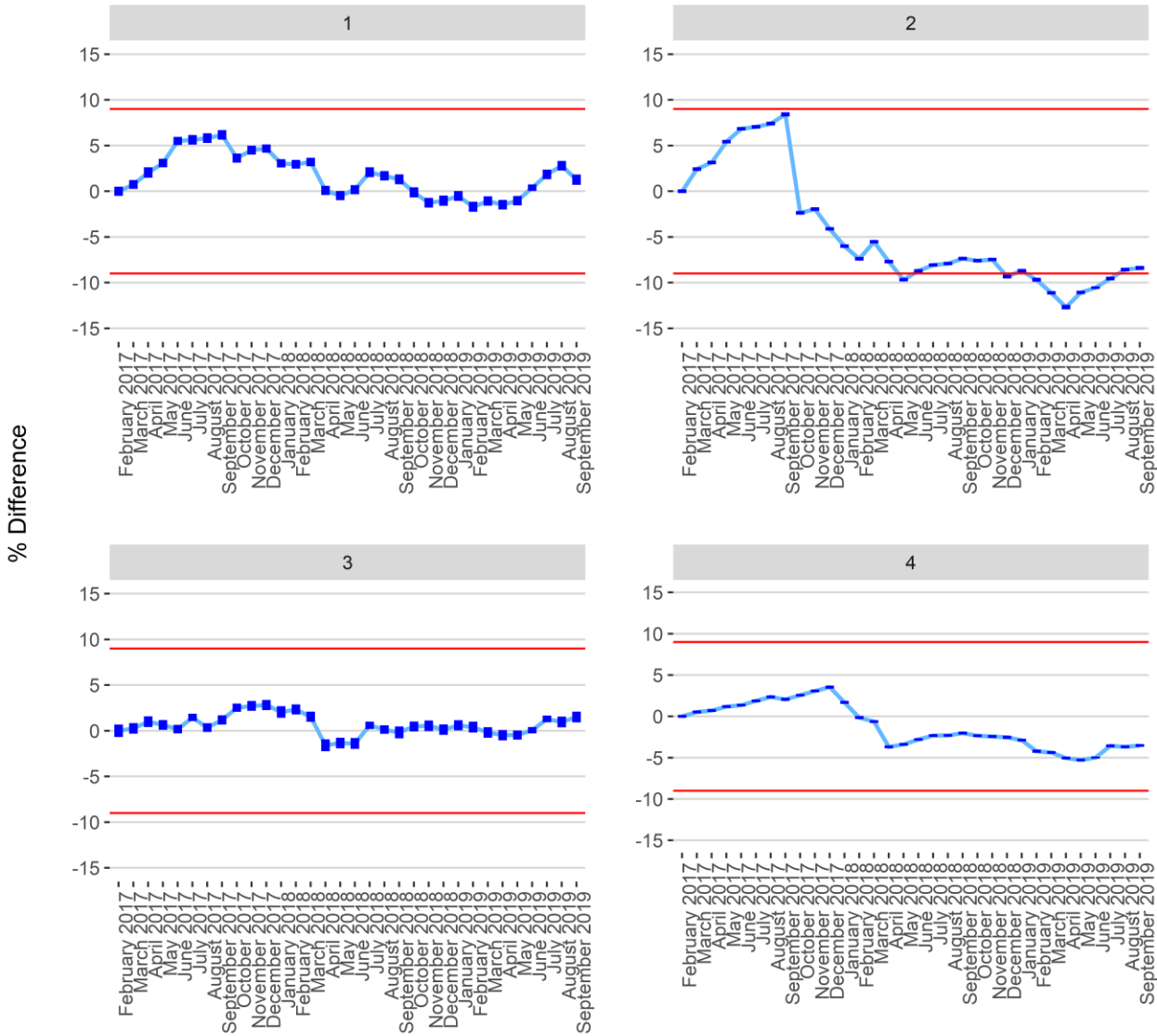
Time

October 2018	January 2019	April 2019	July 2019
November 2018	February 2019	May 2019	August 2019
December 2018	March 2019	June 2019	September 2019

Months that have not passed QC parameters are not displayed



Figure 2 - Percent Difference of Front Axle Weight from  
Last Calibration (+/- 95% CI)



Months that have not passed QC parameters are not displayed

Figure 2 - Average Vehicle Volume  
vs. Day of the Week

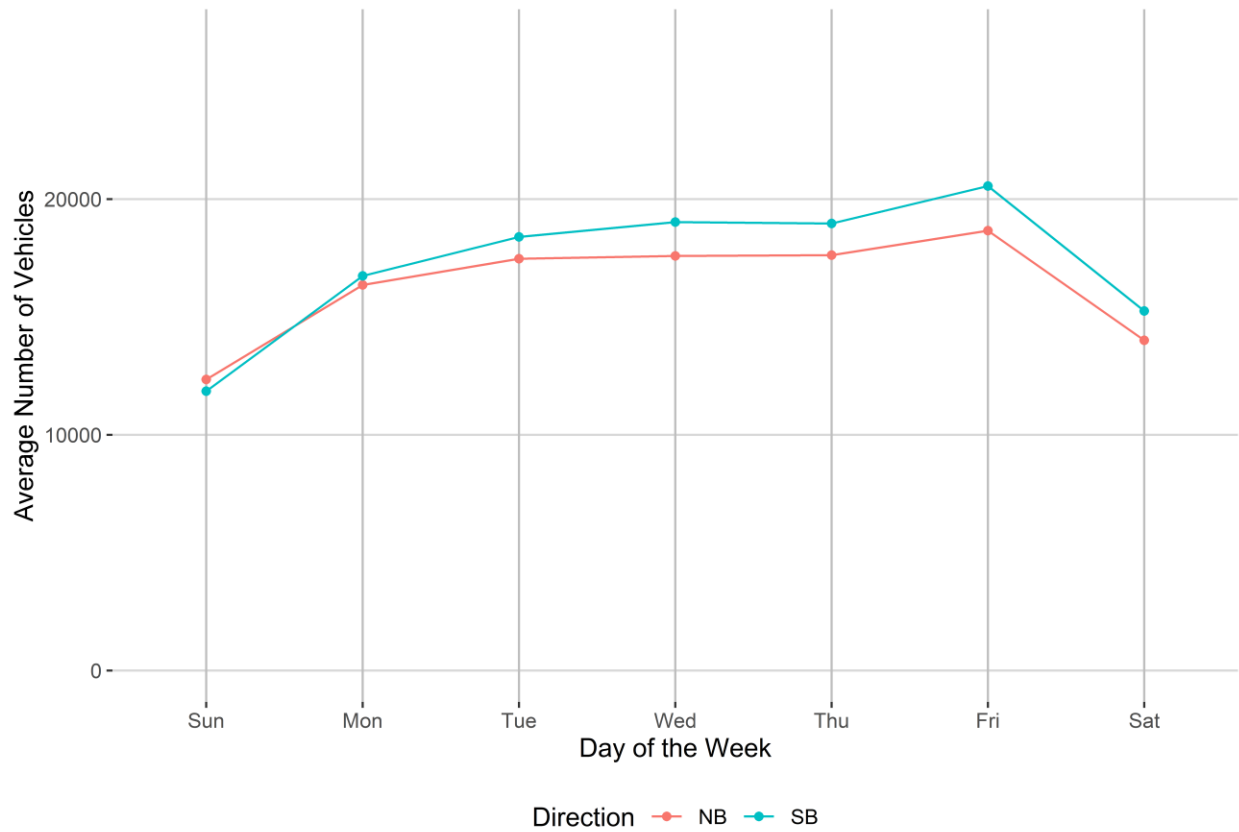


Figure 3 - Average Overweight Vehicle Volume  
vs. Day of the Week

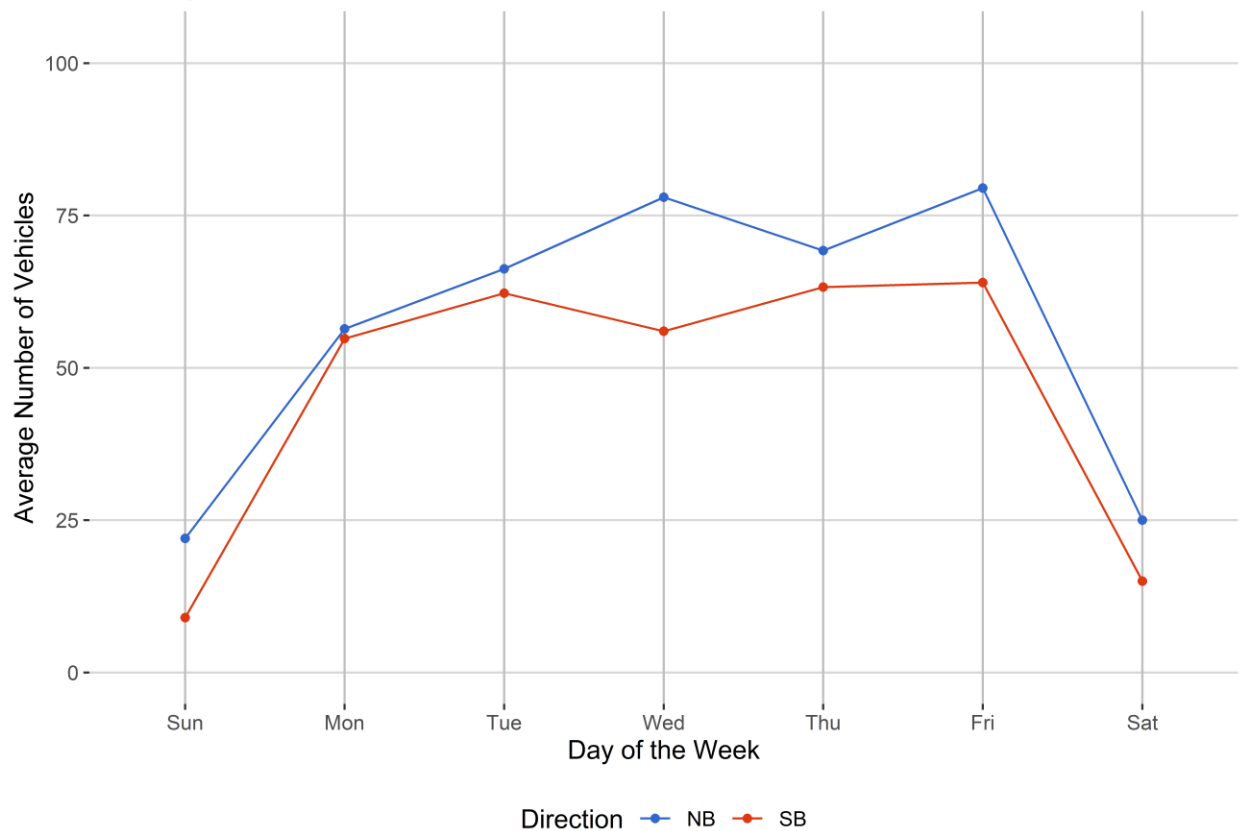


Figure 4 - Passenger Vehicles  
vs. Hour of the Day

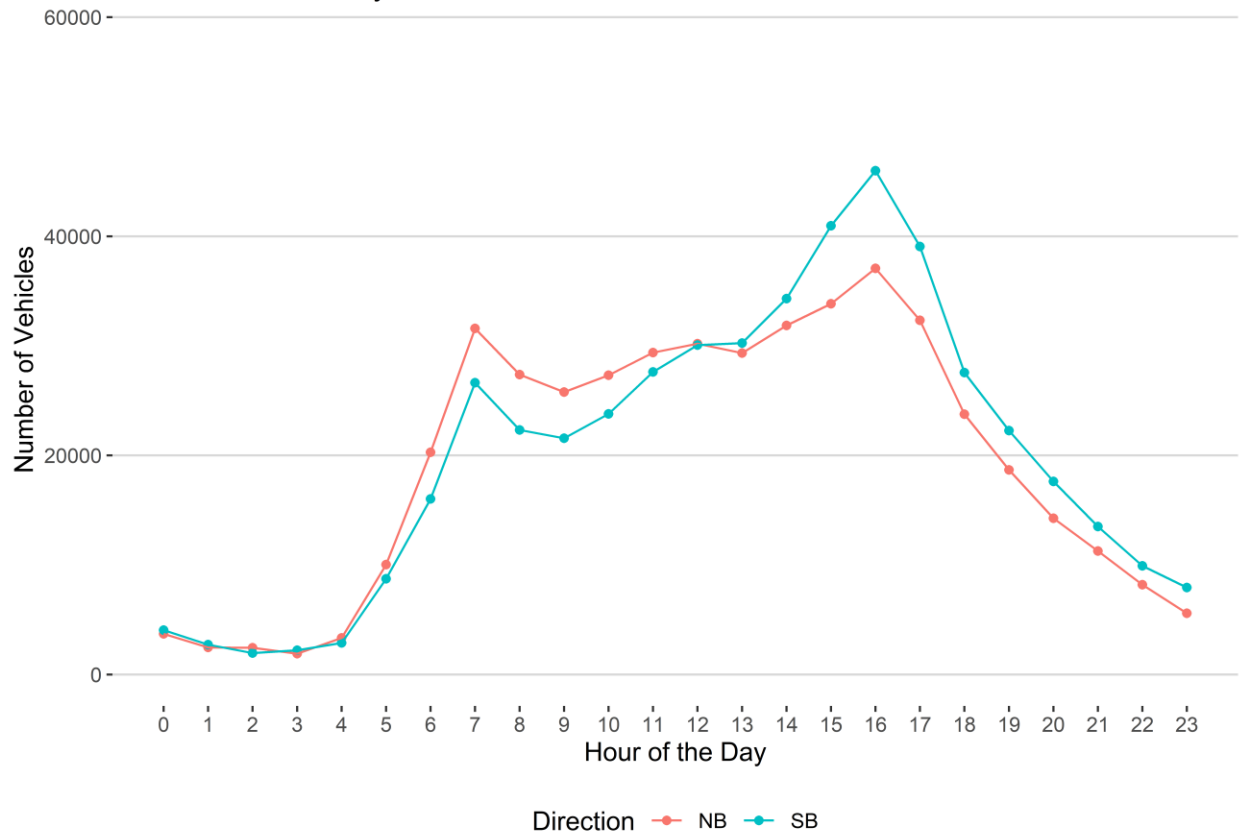


Figure 5 - Heavy Commercial Vehicles  
vs. Hour of the Day

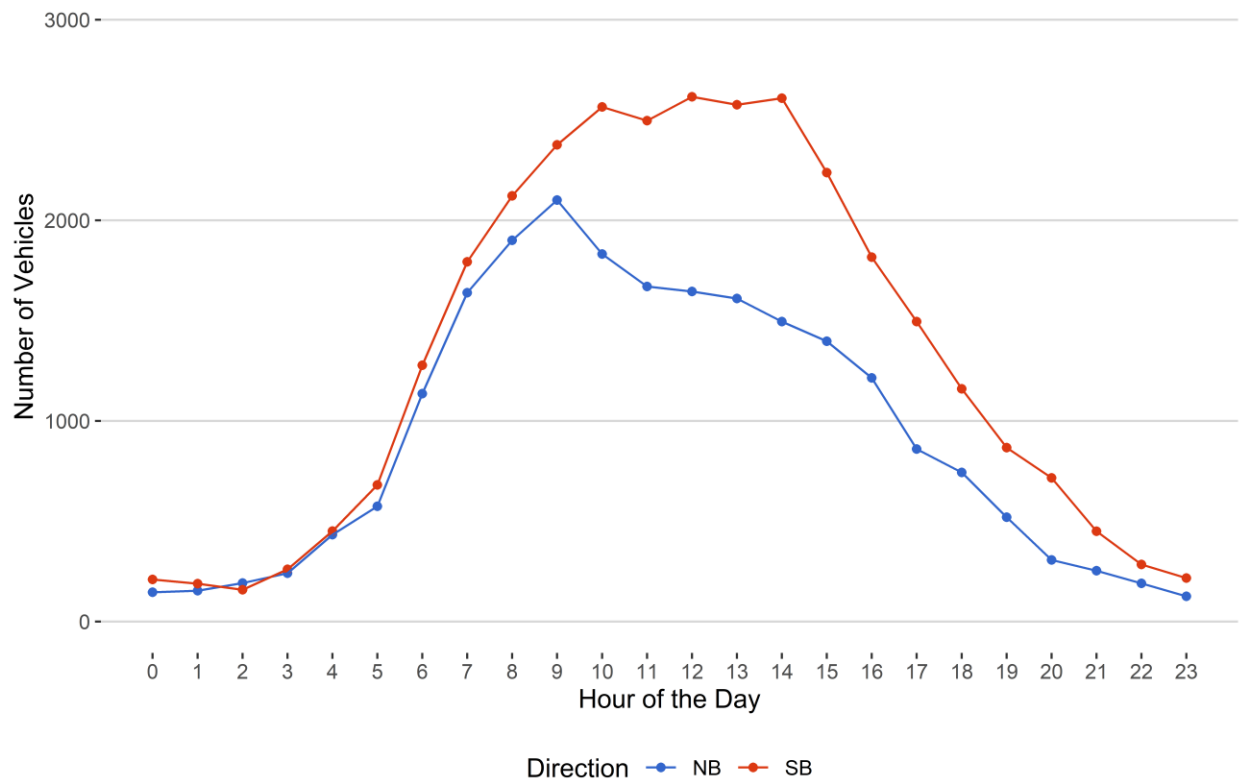




Figure 6 - Overweight Vehicles by Class  
vs. Hour of the Day

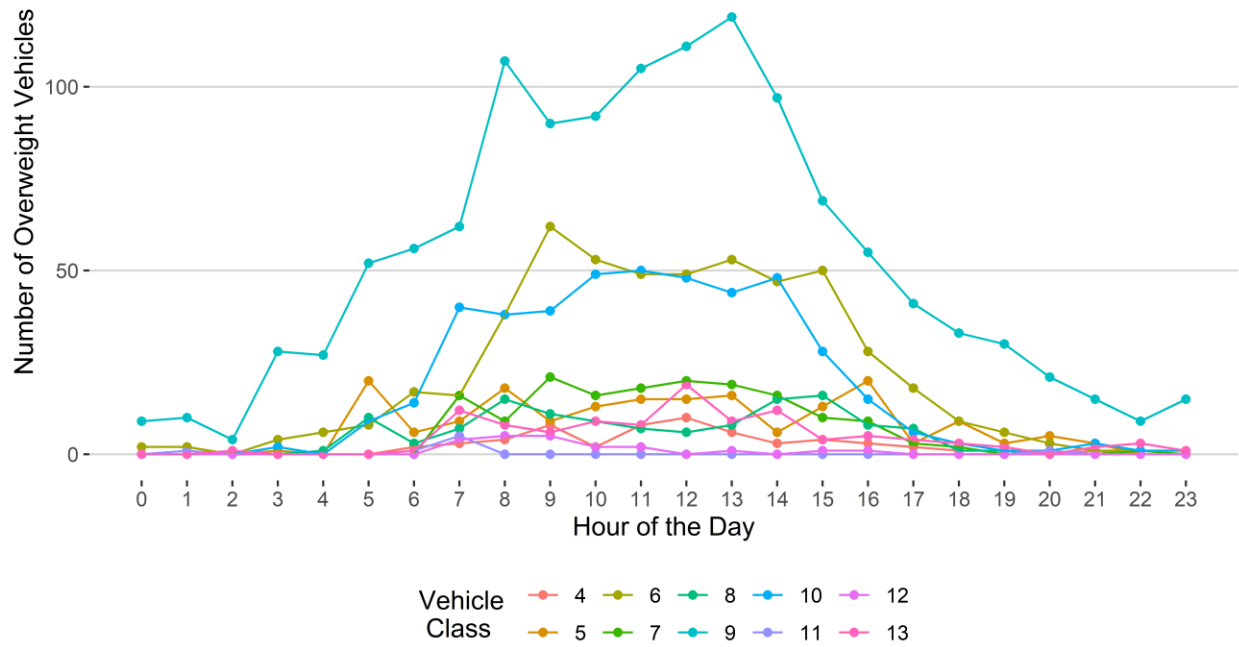


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

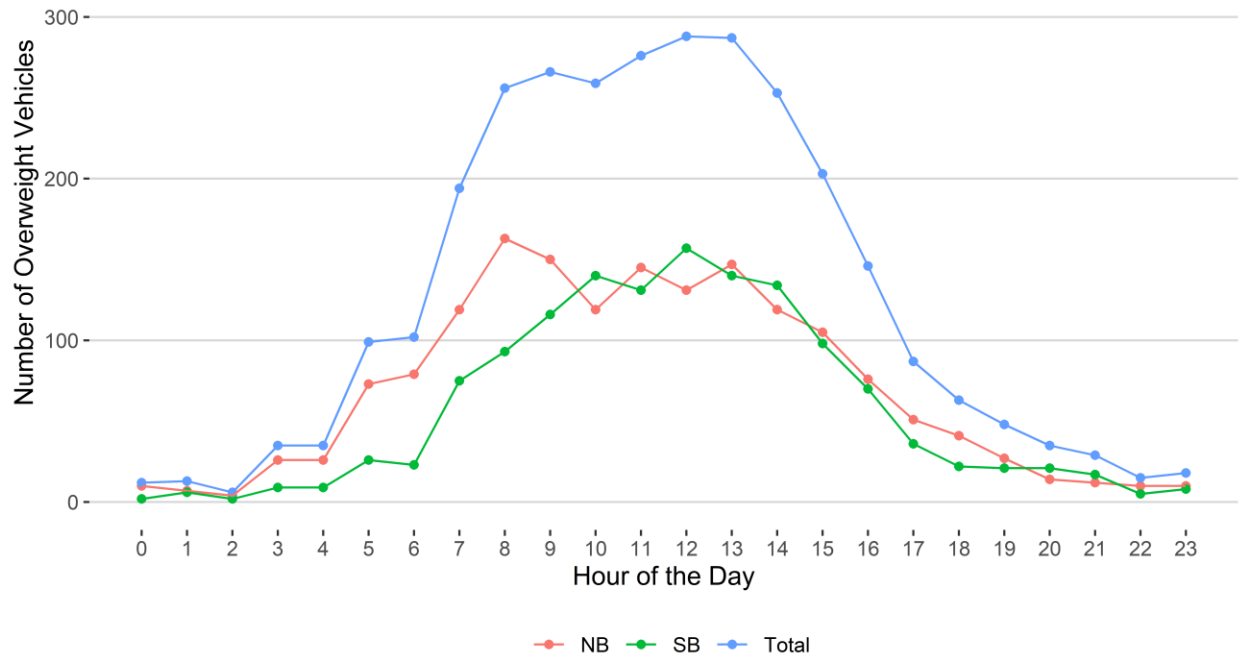
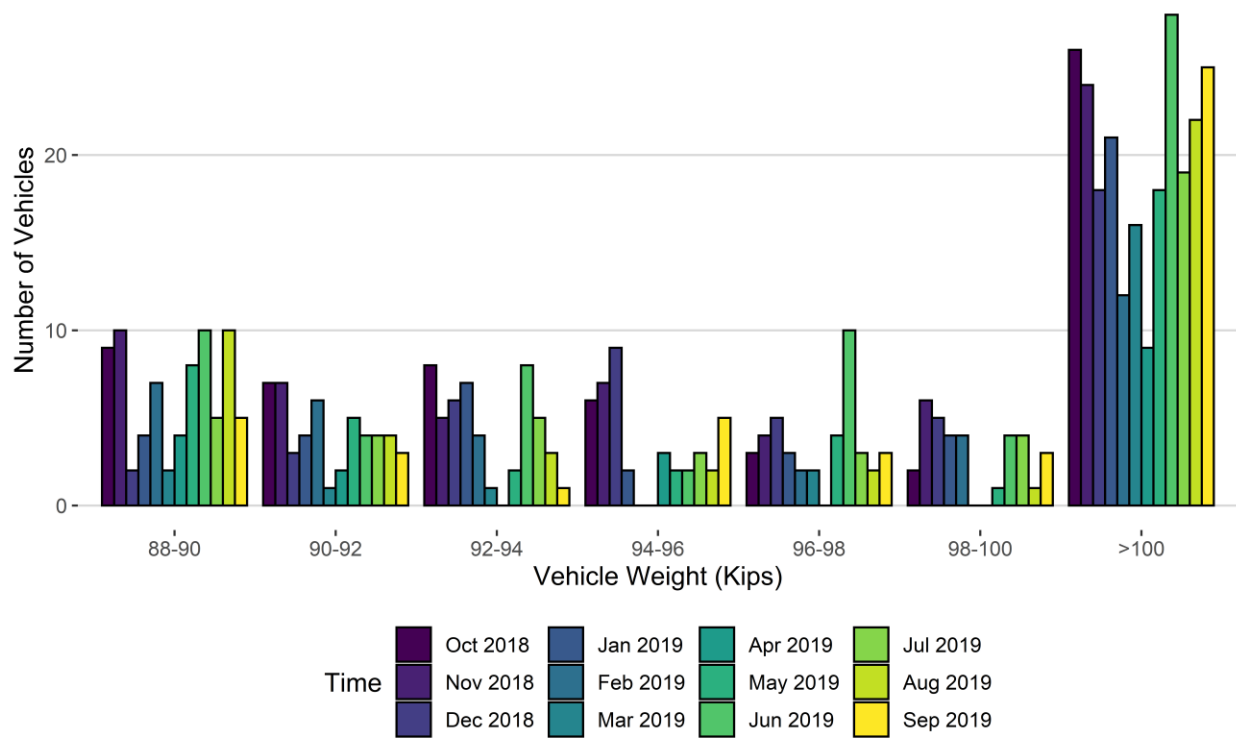
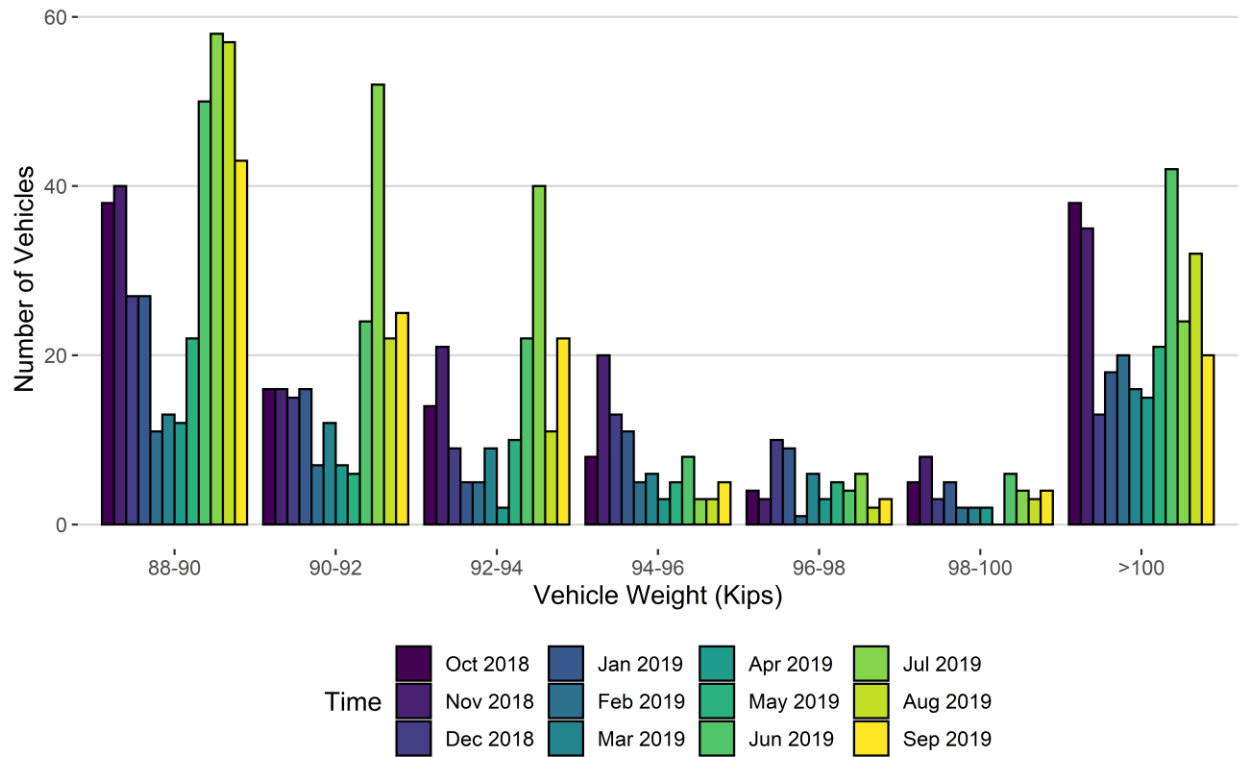


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019
88-90	9	10	2	4	7	2	4	8	10	5	10	5
90-92	7	7	3	4	6	1	2	5	4	4	4	3
92-94	8	5	6	7	4	1	0	2	8	5	3	1
94-96	6	7	9	2	0	0	3	2	2	3	2	5
96-98	3	4	5	3	2	2	0	4	10	3	2	3
98-100	2	6	5	4	4	0	0	1	4	4	1	3
>100	26	24	18	21	12	16	9	18	28	19	22	25
Total	61	63	48	45	35	22	18	40	66	43	44	45

Figure 8 - Histogram of SB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019
88-90	38	40	27	27	11	13	12	22	50	58	57	43
90-92	16	16	15	16	7	12	7	6	24	52	22	25
92-94	14	21	9	5	5	9	2	10	22	40	11	22
94-96	8	20	13	11	5	6	3	5	8	3	3	5
96-98	4	3	10	9	1	6	3	5	4	6	2	3
98-100	5	8	3	5	2	2	2	0	6	4	3	4
>100	38	35	13	18	20	16	15	21	42	24	32	20
Total	123	143	90	91	51	64	44	69	156	187	130	122

Figure 8 - Class 9's and 10's by Direction  
vs Gross Vehicle Weight

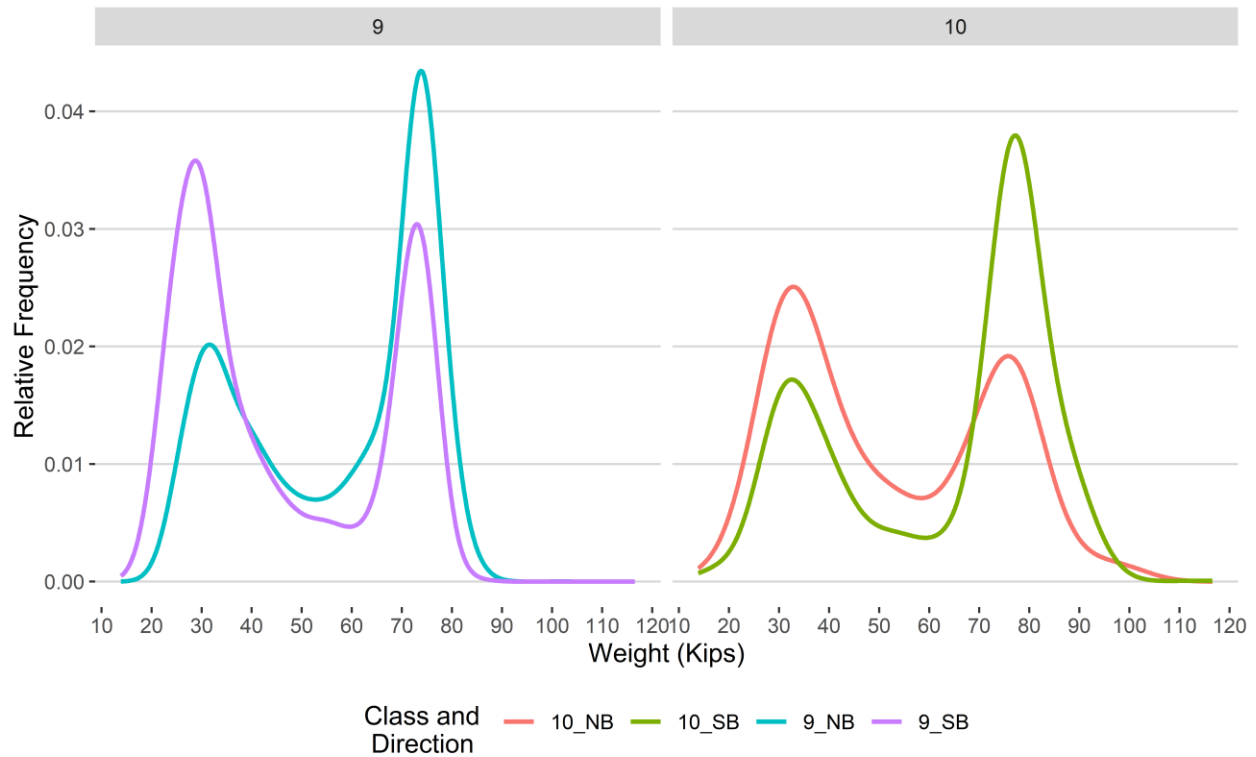


Figure 9 - Freight Percentage  
by Direction and Class

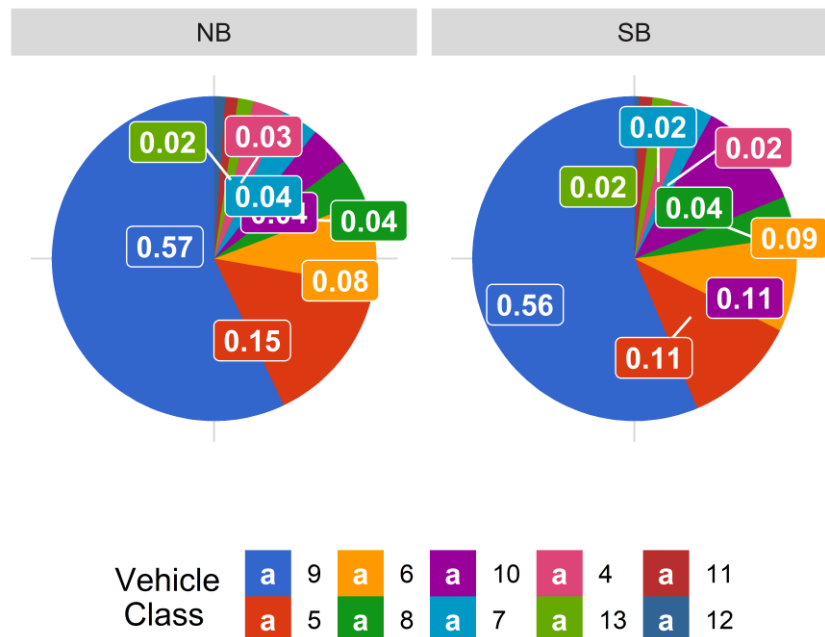


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

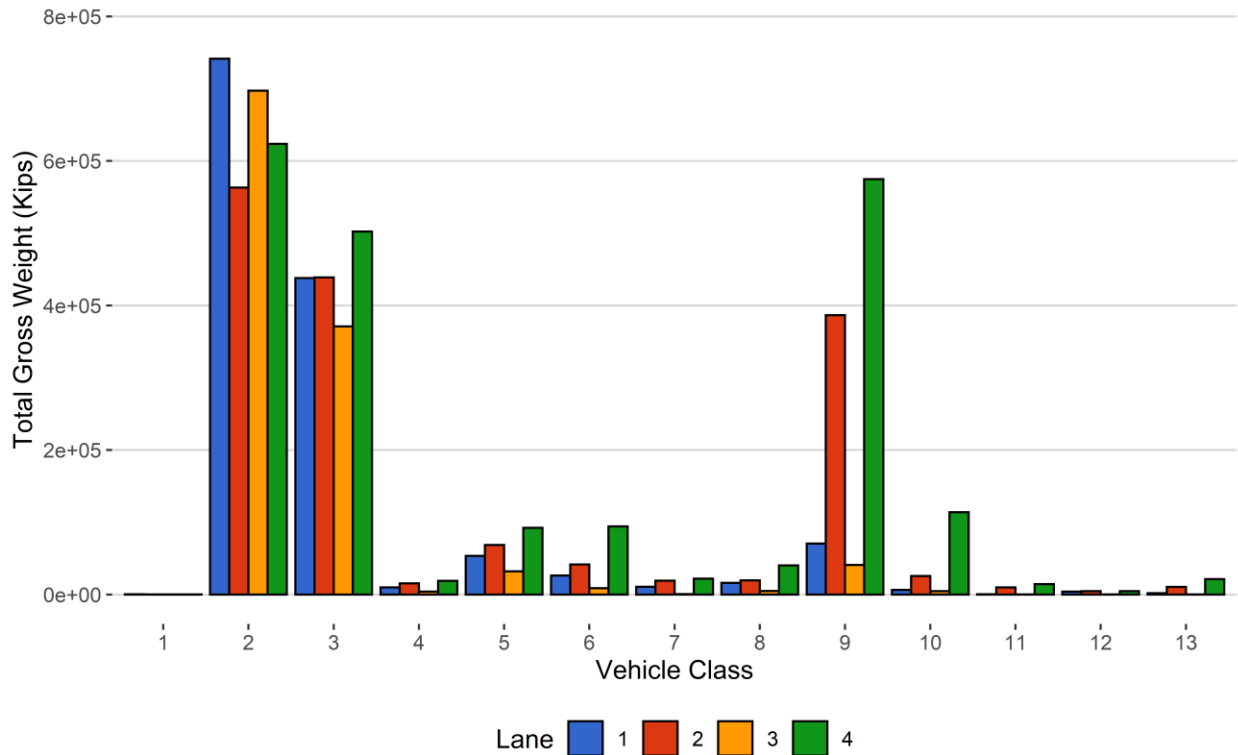


Figure 11 - Total Gross Vehicle Weight t

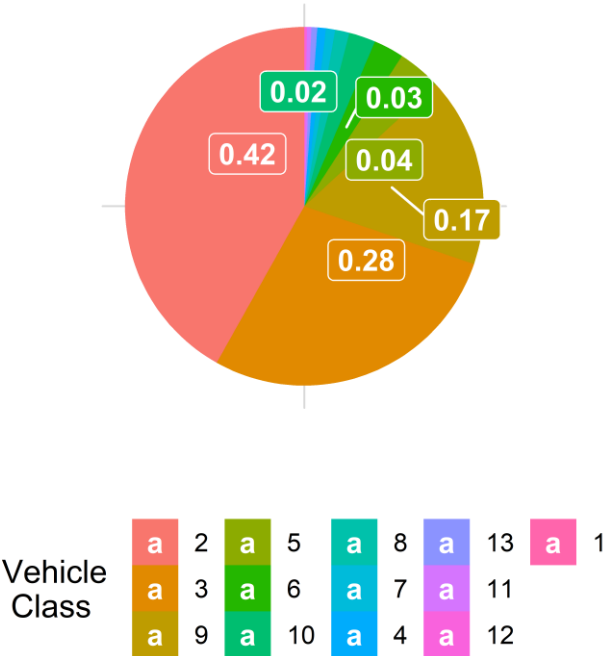




Figure 12 - Total ESALs by Class and Lane

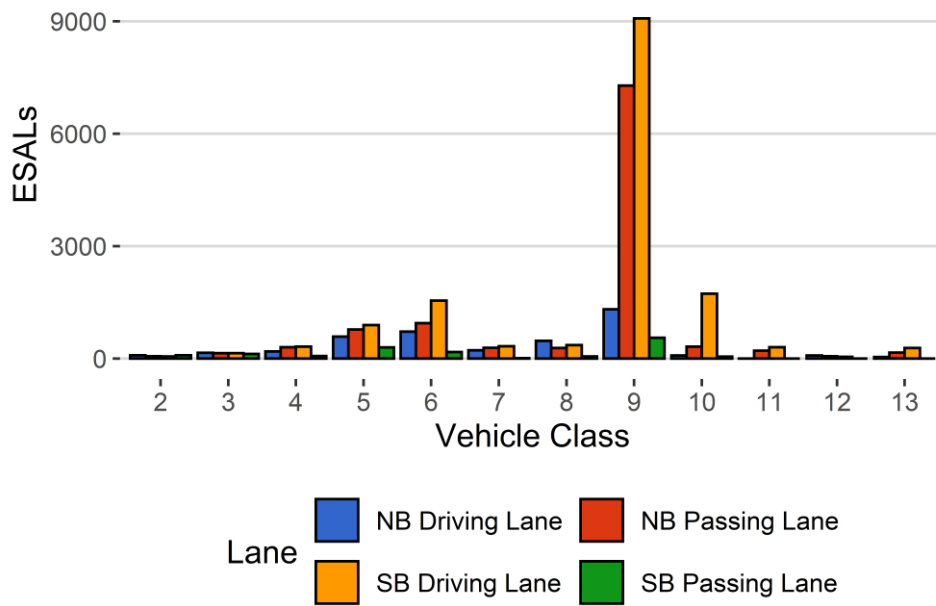
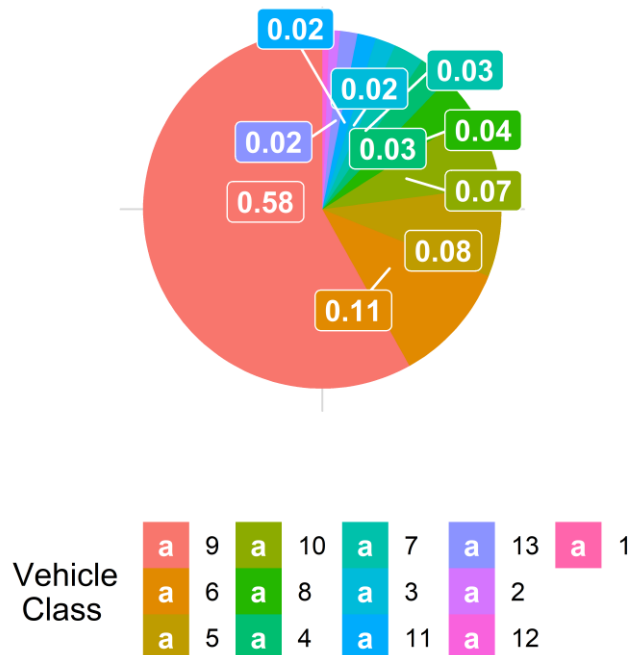


Figure 13 - ESALs by Class



**Table 1 Class 9 Front Axle Weight by Lane**

<i>Month</i>	<i>Lane 1 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 2 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 3 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 4 (kips)</i>	<i>Front Axle +/- 9%</i>
February 2017	11.58	0.00	11.71	0.00	11.07	0.00	10.45	0.00
March 2017	11.67	0.74	12.00	2.43	11.10	0.26	10.50	0.53
April 2017	11.82	2.05	12.08	3.15	11.18	1.00	10.52	0.71
May 2017	11.94	3.09	12.35	5.42	11.14	0.64	10.57	1.18
June 2017	12.22	5.51	12.51	6.84	11.09	0.18	10.59	1.36
July 2017	12.23	5.63	12.54	7.05	11.23	1.46	10.64	1.87
August 2017	12.25	5.81	12.58	7.41	11.11	0.34	10.69	2.35
September 2017	12.29	6.17	12.70	8.41	11.20	1.18	10.66	2.06
October 2017	12.00	3.63	11.43	-2.37	11.35	2.52	10.72	2.56
November 2017	12.10	4.50	11.48	-1.96	11.37	2.73	10.77	3.08
December 2017	12.12	4.67	11.23	-4.12	11.38	2.82	10.82	3.54
January 2018	11.93	3.05	11.01	-6.00	11.30	2.06	10.63	1.69
February 2018	11.92	2.95	10.85	-7.39	11.33	2.33	10.43	-0.15
March 2018	11.95	3.20	11.06	-5.53	11.24	1.53	10.38	-0.63
April 2018	11.59	0.09	10.81	-7.70	10.89	-1.59	10.06	-3.69
May 2018	11.52	-0.49	10.58	-9.68	10.92	-1.34	10.09	-3.39
June 2018	11.60	0.17	10.69	-8.71	10.91	-1.39	10.16	-2.80
July 2018	11.82	2.08	10.77	-8.07	11.13	0.60	10.21	-2.33
August 2018	11.78	1.69	10.78	-7.92	11.08	0.13	10.21	-2.30
September 2018	11.73	1.30	10.85	-7.37	11.05	-0.18	10.24	-2.04
October 2018	11.57	-0.12	10.82	-7.60	11.12	0.47	10.20	-2.34
November 2018	11.43	-1.26	10.84	-7.47	11.13	0.55	10.19	-2.43
December 2018	11.46	-1.04	10.62	-9.33	11.08	0.12	10.18	-2.54
January 2019	11.52	-0.51	10.69	-8.70	11.14	0.60	10.15	-2.88
February 2019	11.38	-1.70	10.58	-9.69	11.11	0.40	10.01	-4.22

March 2019	11.46	-1.07	10.41	-11.12	11.05	-0.18	9.99	-4.37
April 2019	11.41	-1.47	10.22	-12.69	11.02	-0.48	9.92	-5.05
May 2019	11.46	-1.03	10.41	-11.07	11.02	-0.47	9.90	-5.29
June 2019	11.62	0.39	10.48	-10.55	11.08	0.07	9.93	-4.99
July 2019	11.79	1.84	10.59	-9.56	11.21	1.30	10.08	-3.57
August 2019	11.90	2.79	10.71	-8.57	11.18	0.96	10.06	-3.68
September 2019	11.73	1.26	10.73	-8.40	11.24	1.50	10.08	-3.53

**Table 2 Vehicle Classification Data**

<i>Vehicle Class</i>	<i>Monthly Average Daily Volume</i>	<i>Monthly Total Volume</i>	<i>Monthly Total Volume Percentage</i>	<i>Monthly Total Overweight Vehicles</i>	<i>Monthly Total Overweight Percentage</i>
1	22	649	0.1	0	0
2	22978	689337	65.8	0	0
3	10037	301108	28.7	0	0
4	58	1725	0.2	59	2
5	646	19390	1.9	184	6.4
6	190	5705	0.5	523	18.1
7	32	970	0.1	160	5.5
8	95	2854	0.3	125	4.3
9	743	22276	2.1	1257	43.6
10	87	2619	0.2	440	15.2
11	17	500	0	8	0.3
12	8	244	0	21	0.7
13	15	451	0	109	3.8
<b>TOTAL</b>	<b>34928</b>	<b>1047827</b>	<b>100</b>	<b>2886</b>	<b>100</b>

**Table 3 Top 10 Gross Vehicle Weight, Class 9 and 10**

<i>Date</i>	<i>Day of Week</i>	<i>Time</i>	<i>Vehicle Class</i>	<i>Direction</i>	<i>Lane</i>	<i>GVW (lbs)</i>
2019-09-07	Saturday	06:21:08	10	NB	2	135.9
2019-09-13	Friday	07:37:44	10	NB	2	133.83
2019-09-19	Thursday	13:33:52	10	NB	2	129.9
2019-09-05	Thursday	11:43:43	10	NB	2	120.42
2019-09-05	Thursday	13:28:20	10	NB	2	117.94
2019-09-19	Thursday	16:13:53	9	NB	2	117.92
2019-09-23	Monday	16:28:23	10	NB	2	117.22
2019-09-30	Monday	15:22:24	10	NB	2	117.21
2019-09-14	Saturday	09:57:11	10	SB	4	116.56
2019-09-24	Tuesday	13:53:37	10	NB	2	115.97

**Table 4 Freight Summary**

<i>Vehicle Class</i>	<i>Direction</i>	<i>Weight of Empty Vehicle (Kips)</i>	<i>Total Number of Vehicles</i>	<i>Number of Empty Vehicles</i>	<i>Percentage of Empty Vehicles</i>	<i>Total Weight of Vehicles with Freight (Kips)</i>	<i>Total Weight of Empty Vehicles (Kips)</i>	<i>Total Weight of Freight (Tons)</i>
4	NB	15	798	89	11.2	23985	1168	6675
5	NB	8	8863	1034	11.7	114467	7522	25917
6	NB	19	2028	303	14.9	62817	5181	15021
7	NB	11.5	526	0	0	29660	0	11806
8	NB	31	1086	529	48.7	24910	10748	3822
9	NB	33	7979	1364	17.1	417698	39336	99702
10	NB	33.5	610	158	25.9	27436	4571	6147
11	NB	36.5	192	26	13.5	9635	600	1788
12	NB	36.5	144	7	4.9	8591	158	1795
13	NB	31.5	152	0	0	12286	0	3749
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>22378</b>	<b>3510</b>	<b>****</b>	<b>731486</b>	<b>****</b>	<b>176422</b>
<i>Vehicle Class</i>	<i>Direction</i>	<i>Weight of Empty Vehicle (Kips)</i>	<i>Total Number of Vehicles</i>	<i>Number of Empty Vehicles</i>	<i>Percentage of Empty Vehicles</i>	<i>Total Weight of Vehicles with Freight (Kips)</i>	<i>Total Weight of Empty Vehicles (Kips)</i>	<i>Total Weight of Freight (Tons)</i>
4	SB	15	844	141	16.7	21213	1803	5334
5	SB	8	9593	1775	18.5	112088	12305	24772
6	SB	19	3402	512	15	94666	8269	19878
7	SB	11.5	397	0	0	22394	0	8914
8	SB	31	1631	1084	66.5	20505	24597	1774
9	SB	33	13224	5388	40.7	469174	146579	105293
10	SB	33.5	1883	316	16.8	109361	9195	28433
11	SB	36.5	284	69	24.3	12569	1998	2361
12	SB	36.5	88	11	12.5	4479	290	834
13	SB	31.5	277	0	0	21461	0	6368
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>31623</b>	<b>9296</b>	<b>****</b>	<b>887910</b>	<b>****</b>	<b>203961</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>54001</b>	<b>12806</b>	<b>359</b>	<b>1619396</b>	<b>274321</b>	<b>380383</b>



**Table 5 Gross Vehicle Weight by Class and Lane**

<i>Vehicle Class</i>	<i>NB Driving Lane</i>	<i>NB Passing Lane</i>	<i>SB Passing Lane</i>	<i>SB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>
1	245	206	196	201	848	0
2	741424	563178	697267	623601	2625470	41.9
3	438000	438733	370900	502317	1749950	27.9
4	9783	15370	4041	18975	48170	0.8
5	53404	68585	32069	92324	246381	3.9
6	26342	41656	8669	94265	170933	2.7
7	10632	19029	558	21836	52054	0.8
8	16048	19610	4880	40222	80760	1.3
9	70442	386593	40890	574863	1072787	17.1
10	6441	25567	4572	113983	150563	2.4
11	363	9872	141	14426	24803	0.4
12	4019	4730	58	4711	13519	0.2
13	1838	10448	151	21310	33747	0.5
<b>TOTAL</b>	<b>1378981</b>	<b>1603576</b>	<b>1164393</b>	<b>2123035</b>	<b>6269985</b>	<b>100</b>
<b>GVW/LANE</b>	<b>21.99</b>	<b>25.58</b>	<b>18.57</b>	<b>33.86</b>	<b>100</b>	<b>0</b>

**Table 6 ESALs by Class and Lane and Flexible ESAL Factors**

<i>Vehicle Class</i>	<i>NB Driving Lane</i>	<i>NB Passing Lane</i>	<i>SB Passing Lane</i>	<i>SB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>	<i>Flexible ESAL Factor</i>
1	0	0	0	0	0	0	0.0016
2	90	65	90	58	303	0.97	9e-04
3	155	146	126	147	573	1.83	0.004
4	194	305	68	322	888	2.83	1.08
5	585	776	298	897	2556	8.14	0.28
6	723	949	178	1550	3400	10.83	1.25
7	224	288	12	333	856	2.73	1.85
8	475	286	58	363	1182	3.77	0.87
9	1318	7286	555	9078	18237	58.09	1.72
10	82	318	52	1731	2184	6.96	1.75
11	4	213	0	308	525	1.67	2.18
12	84	62	0	50	197	0.63	1.66
13	45	163	2	282	492	1.57	2.26
<b>TOTAL</b>	<b>3979</b>	<b>10855</b>	<b>1441</b>	<b>15119</b>	<b>31394</b>	<b>100</b>	<b>15</b>
<b>ESALS/LANE</b>	<b>12.7</b>	<b>34.6</b>	<b>4.6</b>	<b>48.2</b>	<b>100</b>	<b>-</b>	<b>-</b>

**Table 7 Site Summary: Volume and Vehicle Class**

<i>Month</i>	<i>Total Volume</i>	<i>Month ly ADT</i>	<i>Month ly HCAD T</i>	<i>Passenge r Vehicles</i>	<i>Passeng er Vehicles %</i>	<i>Heavy Commmerc ial Vehicles</i>	<i>Heavy Commmerc ial Vehicles %</i>	<i>Heavy Commmerc ial Vehicles in Driving Lane %</i>	<i>Heavy Commmerc ial Vehicles in Passing Lane %</i>
Oct 2018	1084866	34996	2132	1018760	93.9	66105.8	6.1	61.6	38.4
Nov 2018	937276	31242	1772	884121	94.3	53154.6	5.7	60.6	39.4
Dec 2018	930046	30002	1504	883414	95	46632.1	5	60.6	39.4
Jan 2019	881451	28434	1620	831226	94.3	50225.1	5.7	61.3	38.7
Feb 2019	786575	28092	1649	740410	94.1	46164.9	5.9	62.3	37.7
Mar 2019	958807	30929	1610	908902	94.8	49905.2	5.2	62.1	37.9
Apr 2019	962362	32079	1594	914550	95	47811.7	5	65	35
May 2019	1046270	33745	1867	988387	94.5	57883	5.5	59.9	40.1
Jun 2019	1065465	35516	1951	1006926	94.5	58538.7	5.5	62.4	37.6
Jul 2019	1170433	37756	2082	1105891	94.5	64541.8	5.5	59.2	40.8
Aug 2019	1132052	37639	2070	1067883	94.3	64169	5.7	63.3	36.7
Sep 2019	1047827	35284	1891	991094	94.6	56732.6	5.4	63.9	36.1
<b>TOTAL</b>	<b>12003430</b>	<b>-</b>	<b>-</b>	<b>11341564</b>	<b>-</b>	<b>661865</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>1000286</b>	<b>32976</b>	<b>1812</b>	<b>945130</b>	<b>94</b>	<b>55155</b>	<b>6</b>	<b>62</b>	<b>38</b>

**###ESALs**

<i>Month</i>	<i>ESALS NB Passing Lane</i>	<i>ESALS NB Driving Lane</i>	<i>ESALS SB Driving Lane</i>	<i>ESALS SB Passing Lane</i>	<i>Total ESALS</i>	<i>Driving Lane ESALS %</i>	<i>Passing Lane ESALS %</i>	<i>Pavement Life Decrease Months</i>
Oct 2018	4620	15798	1569	19426	41414	58	42	1.3
Nov 2018	3470	13548	1397	15667	34082	56	44	2.6
Dec 2018	3150	10517	1329	12758	27753	57	43	2.4
Jan 2019	3323	12230	1296	15044	31893	58	42	2.1
Feb 2019	3621	10379	1146	13258	28405	59	41	1.6

Mar 2019	2986	10599	1079	13982	28646	59	41	1.7
Apr 2019	2688	7038	1141	14222	25089	67	33	0.5
May 2019	3613	11993	1449	14268	31323	57	43	1.2
Jun 2019	9436	21061	3719	28974	63190	61	39	1
Jul 2019	6609	11837	3842	15524	37811	59	41	2.7
Aug 2019	6353	14353	1557	16585	38848	59	41	2.4
Sep 2019	4324	21260	1441	15143	42167	46	54	0.6
<b>TOTAL</b>	<b>54192</b>	<b>160614</b>	<b>20965</b>	<b>194851</b>	<b>430621</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>4516</b>	<b>13384</b>	<b>1747</b>	<b>16238</b>	<b>35885</b>	<b>58</b>	<b>42</b>	<b>2</b>

### ###Gross Vehicle Weight

<i>Month</i>	<i>GVW NB Passing Lane</i>	<i>GVW NB Driving Lane</i>	<i>GVW SB Passing Lane</i>	<i>GVW SB Driving Lane</i>	<i>Total GVW Kips</i>
Oct 18	1308390	1827931	1110723	2293147	6540191
Nov 18	1176117	1623806	1025112	1985221	5810257
Dec 18	1149792	1476541	1030529	1815082	5471944
Jan 19	1125027	1469786	949823	1852076	5396712
Feb 19	1024314	1306617	842483	1640893	4814307
Mar 19	1213935	1489460	1027517	1902639	5633552
Apr 19	1195607	1332212	1026882	1915963	5470663
May 19	1318970	1723874	1131963	2073887	6248694
Jun 19	2796503	3349865	2422840	4302709	12871916
Jul 19	1609593	1811100	1549550	2183375	7153618
Aug 19	1561467	1851786	1248051	2369043	7030347
Sep 19	1391468	1611457	1164568	2124653	6292146
<b>TOTAL</b>	<b>16871181</b>	<b>20874435</b>	<b>14530041</b>	<b>26458689</b>	<b>78734346</b>
<b>AVERAGE</b>	<b>1405932</b>	<b>1739536</b>	<b>1210837</b>	<b>2204891</b>	<b>6561196</b>

### ###Overweight Vehicles

<i>Month</i>	<i>Total Number of Overweight Vehicles</i>	<i>Overweight / Total Volume</i>	<i>Overweight / Heavy Commercial Volume</i>	<i>Number Over 88,000 lbs</i>	<i>Number Over 98,000 lbs</i>
Oct 2018	4558	0.5	7.4	184	71
Nov 2018	3394	0.4	6.5	209	75
Dec 2018	2392	0.3	5.2	140	40
Jan 2019	2941	0.3	6	137	49
Feb 2019	2522	0.3	5.6	87	39
Mar 2019	1828	0.2	3.8	86	34
Apr 2019	1493	0.2	3.2	62	26
May 2019	2111	0.2	3.7	110	40
Jun 2019	5152	0.3	4.5	224	82

Jul 2019	3542	0.3	5.6	230	51
Aug 2019	3703	0.3	5.9	175	59
Sep 2019	3025	0.3	5.5	178	58
<b>TOTAL</b>	<b>36661</b>	<b>-</b>	<b>-</b>	<b>1822</b>	<b>624</b>
<b>AVERAGE</b>	<b>3055.1</b>	<b>0.3</b>	<b>5.2</b>	<b>151.8</b>	<b>52</b>

### ###Freight

<i>Month</i>	<i>NB Freight Tons</i>	<i>SB Freight Tons</i>	<i>Total Freight</i>	<i>NB Freight %</i>	<i>SB Freight %</i>
Oct 2018	223564	249546	473110	47.3	52.7
Nov 2018	192487	192392	384879	50	50
Dec 2018	158161	156474	314635	50.3	49.7
Jan 2019	175183	176870	352053	49.8	50.2
Feb 2019	156505	160401	316907	49.4	50.6
Mar 2019	162605	173632	336237	48.4	51.6
Apr 2019	117790	188701	306491	38.4	61.6
May 2019	187128	197189	384317	48.7	51.3
Jun 2019	353894	404240	758134	46.7	53.3
Jul 2019	206750	232123	438873	47.1	52.9
Aug 2019	221471	222957	444428	49.8	50.2
Sep 2019	176422	203961	380383	46.4	53.6
<b>TOTAL</b>	<b>2331960</b>	<b>2558487</b>	<b>4890447</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>194330</b>	<b>213207.3</b>	<b>407537.3</b>	<b>47.7</b>	<b>52.3</b>